

WHAT IS CLAIMED IS:

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5 1. A plane carbon commutator comprising a plurality of metal segments fixed to a commutator body made of resin, and engaging projections provided on a carbon which was previously burnt at a high temperature, said engaging projections being engaged with engaging holes provided in said segments and integrally formed as one unit, wherein tip ends of cut-rising pieces functioning to allow insertion of said engaging projections into said engaging holes but prevent said engaging holes from being pulled out from said engaging holes are projected from peripheral edges of said engaging holes, and said cut-rising pieces are brought into contact under pressure with peripheral faces of said engaging projections.

10 2. A plane carbon commutator according to claim 1, wherein peripheral faces of tip end side engaging projections<sup>15</sup> which have passed through said engaging holes<sup>15</sup> provided in said segments<sup>15</sup> are formed into coarse faces by said cut-rising pieces provided on said peripheral edges of said engaging holes.

15 3. A plane carbon commutator according to claim 1, wherein conductive paste is interposed between said segments and said carbon.

20 4. A producing method of a plane carbon commutator comprising a plurality of metal segments fixed to a commutator body made of resin, and carbon, said segments and said carbon are integrally fixed to each other, wherein said method comprises the steps of:

25 (a) forming peripheral faces of said engaging projections into coarse faces when engaging projections formed on said carbon are inserted into engaging holes formed in a metal base which will become said segments in order to integrally form said carbon which was previously burnt at a high temperature and said metal base;

30 (b) integrally forming said metal base and said carbon and then, coating the entire exposed face of said carbon with mold resin when said engaging projections formed on said carbon are inserted into said engaging holes formed in said metal base;

(c) cutting said metal base into each segment and at the same time, cutting said carbon ; and

35 (d) removing said mold resin from a contact face between said carbon and a brush.